

REMARKS

Reconsideration and allowance are respectfully requested. Upon entry of this amendment, claims 1-77 will be pending.

Applicant thanks the Examiner for the interviews held on June 2-3, 2003.

Applicant has amended certain of the claims so that consistent terminology is used in distinguishing a "structured sentence" from a "structured sentence data item" in the claims. In particular, as the specification makes clear, a structured sentence is a specific instantiation for a particular service plan for a particular customer. In contrast, a structured sentence data item is a type of metadata, and as such has a generic quality associated with it, since it is not associated with a particular customer. Thus, a structured sentence data item contains at least a subject term, may include one or more attribute terms that modify the subject term, and is associated with metadata, whereas a structured sentence is an application to a particular customer of a structured sentence data item and may include one or more specific attribute values associated therewith if the corresponding structured sentence data item includes one or more attribute terms. Accordingly, for example, claim 1 has been amended to more clearly recite the step of "creating a plurality of structured sentences for each of a plurality of identified customer specific needs of a particular customer in an electronic storage area." The edits to the claim are shown above in order to illustrate that a structured sentence is associate with a specific need of a particular customer, rather than an "identified customer need," which could be construed to have some generic aspect to it. In addition, certain of the claims were amended so that consistent terminology is used in distinguishing a "generic electronic workflow specification" (which is metadata) from an "electronic workflow" (which is a specific instantiation of an electronic workflow for a particular customer). Edits of a similar nature have been made with respect to other claims so that they are all consistent in this regard. It is not believed that such edits made are narrowing (particularly as related to the *Festo* decision), but grammatical, in the sense that structured sentences already required the implementation of a service plan for a customer, and that by changing "identified customer needs" to "specific needs of a particular customer" in certain claims eliminates any ambiguity that could be later raised as to potentially different meanings of the same terms in different independent claims and that by changing "workflow" to "generic workflow process specification" in claim 30 also eliminates any ambiguity that could be later raised as to potentially different meanings of the term "workflow" in other independent claims.

Claims 1-8, 11-13, 15, 21-39, 41-48, 51-53, 55 and 61-68 are rejected under 35 USC 102(b) as being anticipated by Macrae et al '237. Applicant respectfully traverses the Examiner's grounds of rejection.

The comments made in the previous office action are applicable herein as well (with the exception of the applicant's attorney's inappropriate reference to "structured sentences" in the paragraph bridging page 8 and 9 when discussing claim 30, since the term "structured sentence data item" should have been used instead.)

As discussed at the interview, structured sentences are distinct from electronic workflows. Furthermore, structured sentence data items are distinct from structured sentences. This terminology actually does clarify the distinctions that exist between the presently claimed inventions and the Macrae '237 patent.

Taking claims 30 and 31 as an example, in these claims it is explicit that a structured sentence data item is used to instantiate a structured sentence using a template, and, further, the selection of a structured sentence data item causes the selection of a workflow instance. As such, these and other claims make clear that the electronic workflow instance that is created as a result of this step is separate and distinct from either the structured sentence data item or the structured sentence. The other claims also maintain this distinction between terms, which is useful to understanding the differences between the Macrae system and the presently claimed inventions.

As also discussed at the interview, terminology used in certain of the claims such as "instances" and "attributes" is not intended to refer to object oriented programming paradigms or specific technology for implementing a system according to the present inventions.

Prior to further discussing specific claims, however, the attached charts in Attachment A illustrate from one point of view the system taught by the present application with the system taught by Macrae, from that same point of view.

These charts illustrate that although Ward and Macrae use some terminology that has some overlap and have similarities regarding meta data, there are important differences in the meaning of terms and the relationships between various types of patient-specific data.

Both Ward and Macrae have meta data for services which is distinct from meta data for workflow. For both Ward and Macrae, workflow meta data takes the form of templates for process flow diagrams. Meta data for services differ in a number of ways:

In Ward, meta data for services take the form of “structured sentence data items” comprised of a subject term, and may include one or more attribute terms that are defined as part of the meta data, thereby permitting the user to specify different attributes appropriate for different subject terms. Structured sentence data items are metadata that define both structured sentences for services and structured sentences for goals, facts, and other concepts that are represented in service plans. In contrast, in Macrae, meta data for services take the form of a library of orderable services. The services in this library do not have attributes that can be defined by the user, and are not used to represent goals, facts or anything else other than orderable services.

In Ward, meta data for services are organized by possible customer needs (e.g. health problems), while in Macrae, meta data for services are organized by the departments that offer the services. When creating a service plan for a particular customer, and that service plan is organized by the needs of the particular customer, it is far easier to find templates with relevant services if the meta data for services is organized by possible customer needs – allowing the system to display templates appropriate the needs of the particular customer.

Ward describes a Service Plan that contains structured sentences that relate to a specific need of a particular customer, separate and distinct from electronic workflow instances. Macrae, in contrast, describes what is called a “Care Plan”, but which takes the form of a single electronic workflow instance.

Thus, in Ward, the Service Plan is a data structure which includes a collection of structured sentences, including structured sentences for services (e.g. “orders” in health care context). Each of these structured sentences for services are associated with a customer need (e.g. a health problem) of the particular customer. These structured sentences are instantiated within a Service Plan for a particular customer based on structured sentence data items, typically selected from within previously created templates (e.g. care plan templates). The process step of selecting structured sentence data items within such a template causes the instantiation of a structured sentence within the Service Plan for the particular customer. For each of the structured sentences for services (orders) within the Service Plan for a particular customer, the system then creates a separate instance of an electronic workflow, in the form of a process flow diagram. This method for creating workflow instances utilizes workflow metadata. The process steps in the workflow process diagram correspond to the steps of providing the service (e.g. the steps of executing a specific medical order for a particular patient).

Key points about the separation of the Service Plan from Electronic Workflow instances are:

- The user (clinician) interacts with structured sentence data items to create the Service Plan or previously created structured sentences when modifying a Service Plan, not workflow process flow diagrams and associated graphical icons.

- A separate electronic workflow instance is created for each order. Therefore, the electronic workflow instance is not the Service Plan, but rather only dictates the steps of execution of a single order.

- A single Service Plan for a particular customer can be (and typically is) associated with many workflow instances.

In contrast, in Macrae, the Care Plan includes "nodes", including one or more "order nodes", each of which may contain (inside the workflow process flow diagram) one or more orders. Some key points about the lack of separation of Care Plan and Electronic Workflow in Macrae:

- The clinician must manipulate process flow diagrams and associated icons to create the Care Plan and enter or modify the orders (something that we believe to be too unfamiliar and tedious to be feasible during busy clinic sessions).

- A single workflow instance comprises the entire Care Plan. The workflow instance describes the sequence of orders, not the steps of execution of a single order.

With the above understanding in mind, the patentable features of various claims can be recognized.

That a structured sentence is recited as being distinct from the electronic workflow is one clear distinction. Macrae does not have this. As clearly recited, "structured sentences" are not in a library, but are associated with a particular customer, in a service plan for that customer. Workflow and workflow instances are separate and distinct from this. In contrast, the "orders" of Macrae, which are most closely aligned to the concept of structured sentences in the present invention, are within the workflow, and not separate and distinct from it. Accordingly, this recitation in claims 1, 26 and 41 is a patentable distinction. This separateness of structured sentence and workflow instances can be further seen from looking at certain of the dependent claims. For example, claim 6 and 46 discuss a structured sentence that has attributes, and recite that modification of the attribute causes a change to the sequence of tasks invoked within one of the workflow process instances.

Other patentable distinctions exist as well. Independent claim 26 is directed to automatically updating a predetermined plurality of existing plans. The Examiner's reference to column 7, lines 63-67, column 8, lines 1-3, and column 17, lines 23-26 of Macrae do not teach or suggest this concept. While in the Macrae system a single Care Plan can of course be updated for a particular patient, there is no provision for automatically updating a plurality of plans using the method set forth in claim 26.

Independent claim 30, while not using the term "structured sentence," uses a slightly different terminology of "selecting" a structured sentence data item, and then introduces the terminology of a structured sentence in claim 31. Selecting structured sentence data items also causes the selection of workflow instances that assist in the completion of each needed service, thereby again showing that the selection of each structured sentence data item will cause the selection of a different workflow instance, a concept that is foreign to Macrae. Furthermore, the concept of grouping templates that each have different structured sentence data items by different possible customer needs is respectfully not taught by Macrae, contrary to the assertion of the Examiner.

Accordingly, it is respectfully submitted that independent claims 1, 26, 30 and 41, and the claims dependent thereon, contain patentably distinct subject matter.

Claims dependent on these claims are also patentably distinct. For example, claims 21 and 61 further illustrate another further flexibility that the present invention has. In claims 21 and 61, other structured sentences that do not relate to services are added, which increase the flexibility of the system. The '237 patent does not disclose or suggest structured sentences independent of the workflow for any of a goal, fact, protocol or finding at column 8, lines 23-29 or column 13, lines 29-31 referenced by the Examiner.

Claims 24 and 64 recite providing a service plan in one form to a user and in another form to a customer. This feature is not disclosed or suggested by the '237 patent.

Claims 9-10, 17-20, 40, 49-50, and 57-60 stand rejected under 35 USC 103 as being unpatentable over the '237 patent in view of the Brown '095 patent. Applicant respectfully traverses the Examiner's grounds of rejection.


Initially, Applicant maintains that the combination of the '237 patent and the '095 patent would not have been attempted by one of ordinary skill in the art. The '237 patent requires a specific type of workflow process in order to operate, and makes no provision for inclusion of information from sources such as a Palm device as described in the '095 patent. The types of portable devices

described in the '095 patent would not be suitable for the complex manipulations of graphical icons in workflow diagrams required in the '237 patent, which would require a larger graphical display screen. Also, these same workflow diagram interactions described in the '237 patent would not be sufficiently intuitive to be used directly by patients, which are the intended end users of the system envisioned in the '095 patent.

Further, *assuming arguendo* that the combination is appropriate, the claims contain allowable subject matter. Certain of these claims are based upon an allowable independent claim, and are allowable for that reason alone.

Independent claim 40 specifies a method for determining a revised generic workflow specification based upon dismissed alerts which is nowhere disclosed or taught by Macrae, in addition to the separateness between structured sentences and workflow. While the Examiner acknowledges that Macrae does not teach or suggest the concept of alerts, Brown is alleged to make up for this deficiency. While Brown discloses alerts generally, the existence of alerts is not the invention being claimed, but instead the grouping of inappropriate alerts to identify problems with the metadata (including structured sentence data items and generic workflow specifications) and therefore to educate the process of revising this metadata. This is nowhere taught or suggested by Brown.

Claims 14, 16, 54, 56, 69, and 70 are rejected under 35 USC 103 as being unpatentable over Macrae. Applicant respectfully traverses the Examiner's grounds of rejection.

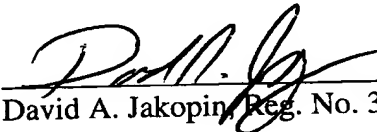
Initially, it is noted that all of these claims contain allowable subject matter since they are based upon a base claim containing allowable subject matter. Furthermore, the claims are patentable standing alone. For example, there is no teaching or suggestion of using a workflow automation process to distribute a draft of the structured sentences to the interdisciplinary team as recited in new claims 69 and 70 in Macrae, contrary to the assertion made by the Examiner with respect to the cited reference in Macrae. 

New dependent claims 71-77 have also been added, and set forth further patentable subject matter.

In view of the above amendments and remarks, Applicants submit that the above-referenced application is in a condition for allowance, and such a notice is respectfully requested.

CHARGE STATEMENT: The Commissioner is hereby authorized to charge any missing or insufficient fee which may be required relative to this application, or credit any overpayment, to our Account 03-3975/Order No. 073618/0259567 (RHS-001-U)

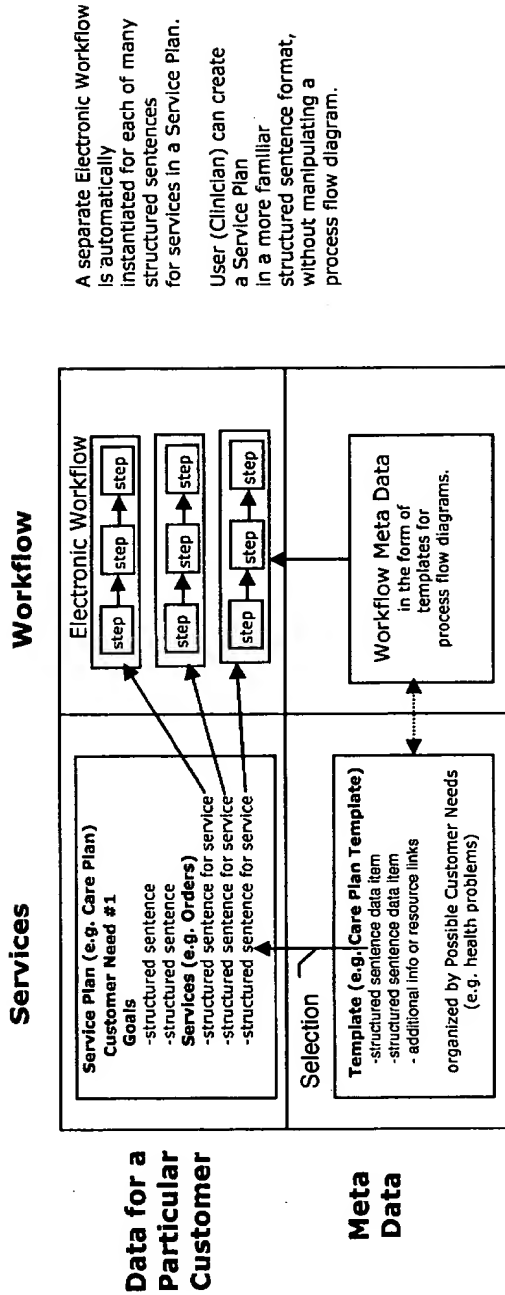
Respectfully submitted,


David A. Jakopin, Reg. No. 32,995

PILLSBURY WINTHROP LLP

1600 Tysons Boulevard
McLean, Virginia 22012
(650) 233-4790

60230289



A separate Electronic Workflow is automatically instantiated for each of many structured sentences for services in a Service Plan. User (Clinician) can create a Service Plan in a more familiar structured sentence format, without manipulating a process flow diagram.

Single Electronic Workflow instance embodies the entire Care Plan. All the orders for the Care Plan stored inside a process flow diagram. Therefore, clinician creating a Care Plan must manipulate an unfamiliar process flow diagram format.

Workflow

Services

